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Common Postural Deformities and Its Remedial Measures

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Abstract:

There are numerous concepts and views regarding human posture and its significance. The posture means body position. It is the specific position of a person while sitting, standing, walking, lying etc. Good posture is the image of good personality. The posture changes from individual to individual. One posture which may be considered good for one individual may not hold true for another individual. Bad posture decreases our personality and it leads to many health problems. When the human beings are habitual of bad posture position then the people suffered from many postural deformities e.g. Kyphosis, lordosis, scoliosis, knock knee, bow legs etc. There are numbers of postural deformities which may either be acquired or may be congenital. Each type of postural deviation has its own peculiar causes and effects. Therefore, each postural deformity demands and requires proper attention and specific treatment for correcting the same. The present study aimed is the treatment and prevention of common postural deformities and its remedial measures.

Key-words: Posture, Postural Deformity, Asana, Kyphosis, Lordosis, Scoliosis, Knock knee,

Introduction:

Posture is defined as “Position of the body or the relative arrangement of the parts of the body”. Broadly speaking, the posture concerns the way an individual carries himself while sitting, standing, walking and lying. The “good posture” is the posture in which the body segments are balanced in the position of least strain and maximum support. We cannot even sleep in one posture throughout night. Body itself compels an individual to change the posture. Similarly, sitting in a particular rigid position or standing attention or in erect military like position cannot be said to be good posture. The general characteristics of a good posture are erectness, balance, alignment, and ease. In good postural body alignment, the centre of gravity of all the segments such as head, neck and trunk will fall as nearly as possible, in a straight vertical line which passed through the approximate centre of the feet. There is definitely a relationship between the alignment of body segments and the integrity of joint structure. The human machine functions more efficiently when the weight bearing segments are in proper alignment with a minimum of stress and strain on them.

Our environment contains many forces that act upon our body and sometimes due to these forces, we suffer from postural deformities. Most likely, the postural deformities may be due to the pull of gravity, congenital, malnutrition and prolonged illness. Postural deformities are two types i.e., functional and structural. In functional deformities, only the soft tissue i.e., the muscles and the ligaments are affected. In this case the correction of postural deformities is possible through various corrective measures. On the other hand structural deformities occur when our bony structure is affected. Physical activities and their corrective measures in such

cases cannot play any significant role. In fact, in such cases, surgery can be helpful for securing the desired improvement. The role of physical activity as well as other corrective measures in functional deformities is very effective, especially during elementary school years. Indeed physical activities or corrective exercises in various forms can serve to counteract the effect of gravitational force. The correction of postural deformities should be a part of school education. The programme for the correction of postural deformities in a school should be included serve more than just an exercise for correcting a specific deformity.

Objectives :

The main objectives of the present study are:

- ❖ The study will help in the management of posture deformities through corrective measures.
- ❖ The study will help in the treatment of postural deformities.
- ❖ The study will help in analyzing the posture deformities.

Methodology :

In order to locate research studies and interventions that examined the treatment of common postural deformities and its remedial measures, databases were searched through web based, leading books and journals.

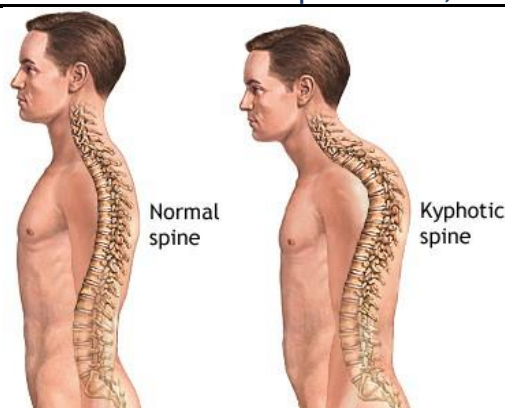
Discussion :

Posture is a tool of mechanical efficiency of body which causes minimum stress to muscles. According to doctor, Posture is soundness of physiological balance of body. The main causes of poor posture are -

I. Injury / accident	VI. Lack of exercise
II. Improper / wrong treatment	VII. Overload
III. Disease	VIII. Obesity
IV. Lack of nutritional diet	IX. Occupation
V. Wrong postural habits	X. Lack of Awareness

Malformation of any component or part of the body which results in postural difficulties, i.e., while standing, walking, sleeping, etc., are termed as common postural deformities. There are number of postural deformities which may either be acquired or may be congenital. Each type of postural deviation has its own peculiar causes and effects. Therefore, each postural deformity demands and requires proper attention and specific treatment for correcting the same. There are various postural deformities like Kyphosis, Lordosis, Scoliosis, Knock knees, Bow leg, Flat foot etc. In this section major postural deformities, along with their cause, prevention and remedial measures, have been dealt with.

1. **Kyphosis** : Kyphosis is an exaggeration or increase in the amount of the normal convexity of the thoracic region of spine. It is an abnormal increase in the flexion of the spine and outward curvature of the spine with round shoulders and head drooped forward, resulting in a hump towards the back.



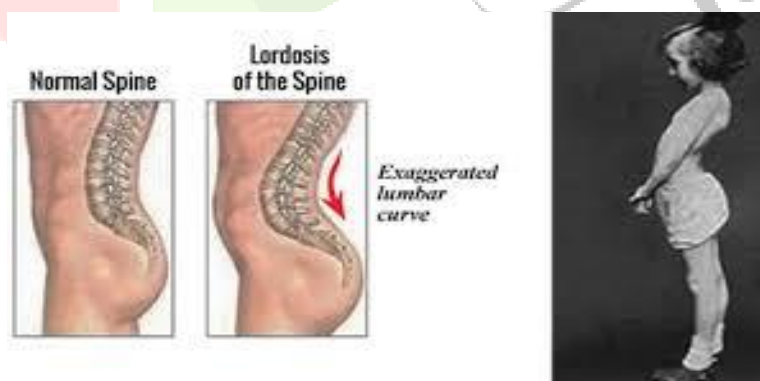
Causes of Kyphosis :

Kyphosis is caused by malnutrition, illness, deficiency of pure air, insufficient exercises, rickets, carrying heavy loads on shoulders, weak muscles of chest and shoulder, habit of doing work by leaning forward and due to heredity etc.

Preventive and Remedial Measures :

Through regular and appropriate exercises the extensors should be strengthened and their tonus should be improved. Excess gravital stresses can be removed by realignment of head, arms and shoulder girdle or by variety in occupational positions. Swimming is recommended as an important exercise and performing Chakrasana, Bhujangasana, Ushttasana and Dhanurasana are also beneficial as remedial measures. It is also advised always keep a pillow under your back while sleeping. However, corrective exercises should be advised only after consultation with physician or physiotherapist.

2. **Lordosis** : Lordosis is a postural deformity in which the lumbar spine bends in front beyond the normal level. Thus, abdomen is ahead of body and shoulders come outward and sideward. Lordosis symptoms are lower back pain, stomach appears to be bulging out more than normal. It creates problem in standing and walking. The body seems to be stiff. The individual feels shame and inferiority. Lordosis can be corrected in an early stage.



Causes of Lordosis :

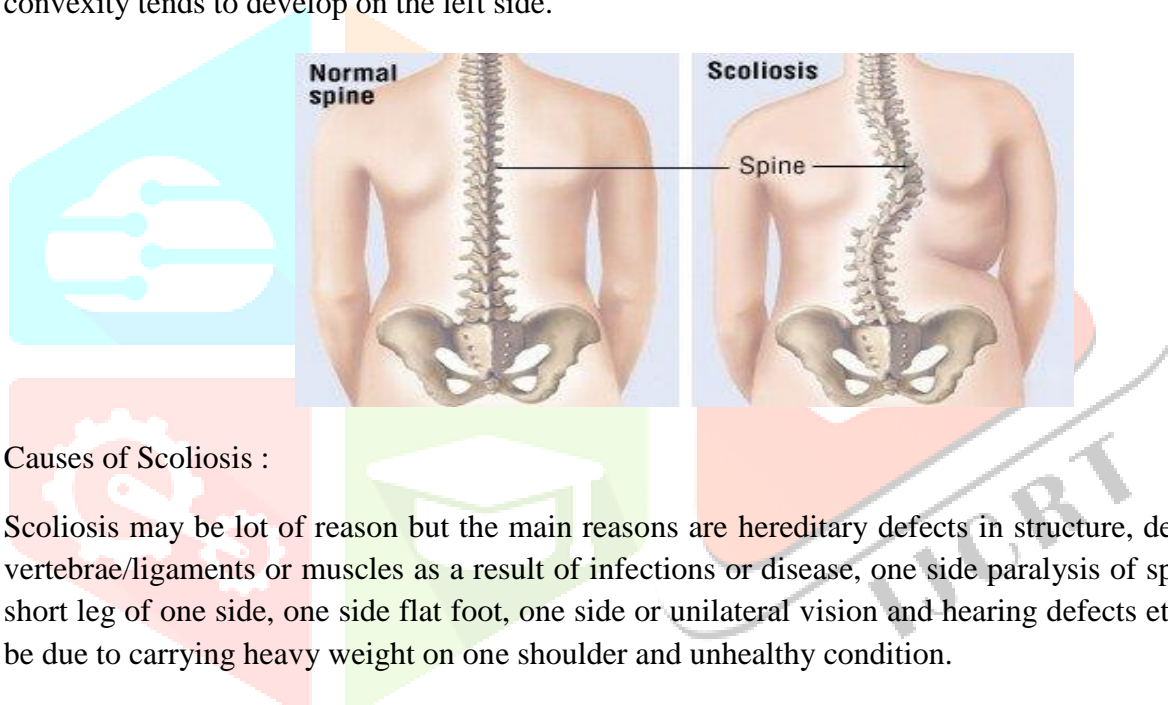
The causes of Lordosis are weak abdominal muscle, overweight or obesity, imbalance diet, improper environment, improper development of muscle, sedentary lifestyle etc.

Preventive and Remedial Measures :

It is necessary to develop the strength in abdominal muscles and exercises should be undertaken to control the position of pelvis. It is necessary that the person, through regular exercises, should secure

proper coordination of the muscle groups. For effective strengthening of the muscles, it is recommended to sit on a bench against a wall and pushing the trunk backward so that it touches the wall in the lumbar region. This position tilts the pelvis backward and helps to straighten the lumbar spine. Another beneficial exercise is, while lying on the back on the floor with hips flexed, feet vertically over the face, and from this position move the feet in a circle as large as one can, as in bicycling. Performing Paschimoasana, Halasana, Tadasana and Trikonasana are also beneficial for curing this deformity. However, one should consult the physician before undertaking any corrective exercises.

3. **Scoliosis** : It is an exaggerated lateral curvature, sideward curvature or deviation of the spine, with the shoulder lower and hip higher on one side. The curve may be convex to either side, in either the thoracic and lumbar region, or to either side through both regions, or to one side in one region and to the other in the adjacent region. Lateral curvature lessens the ability of the spine to support the body weight, distorts the body cavities, crowds the organs out of place, and in advance cases, causes pressure on spinal nerves also. Scoliosis generally begins with a single C-curve. This can be on the either side, but as most of the people are right handed, the muscles of the right side of the body are generally stronger and the convexity tends to develop on the left side.



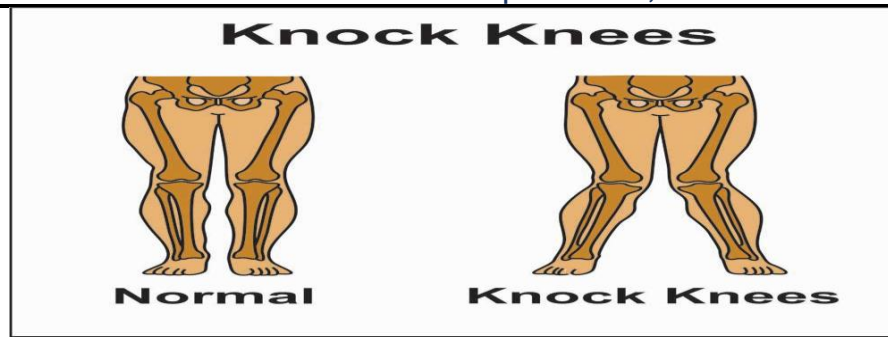
Causes of Scoliosis :

Scoliosis may be lot of reason but the main reasons are hereditary defects in structure, deterioration of vertebrae/ligaments or muscles as a result of infections or disease, one side paralysis of spinal muscles, short leg of one side, one side flat foot, one side or unilateral vision and hearing defects etc. It may also be due to carrying heavy weight on one shoulder and unhealthy condition.

Preventive and Remedial Measures :

In the early stages, scoliosis may be functional or postural. This can be cured through voluntary efforts e.g. by hanging oneself from the hands, using body weights, correction of the poorly balanced gravital pull, and by developing strength in spinal extensors through corrective exercises. Lateral bending to the side of convexity e.g. Trikonasana and Tarasana will help in developing those muscles which have become relaxed and stretched. However, in the later stages, the condition becomes resistant, or structural, and the curve can no longer be corrected through above mentioned exercises and advice and guidance of a qualified physician should be obtained before resorting to any corrective exercises.

4. **Knock knees** : The knock knees are one of the major postural deformities. In this deformity, both the knees knock or touch each other in normal standing position. The gap between ankles goes on increasing. The individual faces difficulty in walking and running. He cannot walk or run in a proper manner. Owing to this deformity, they cannot be good players and even they are not selected in defense service.



Causes of Knock knees :

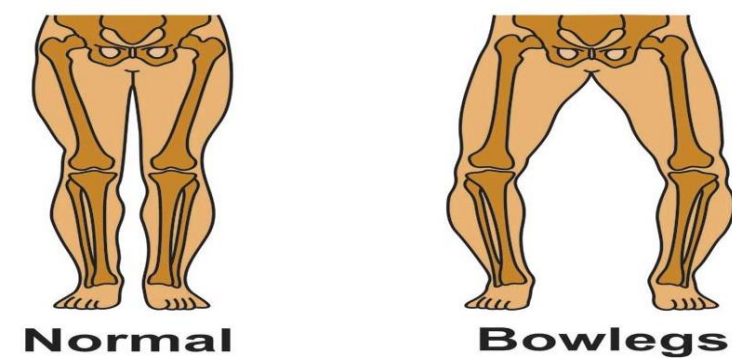
The main causes of Knock knees are Rickets, weak leg, obesity during childhood, chronic illness, over weight etc.

Preventive and Remedial Measures :

Generally the deformity of Knock-knees cannot be corrected through exercise during later childhood and adulthood. But this deformity can be corrected up to some extent through exercises, particularly when it is detected. The favorable results of exercise can be achieved during the phase of early childhood. The following exercises should be performed.

- ❖ Horse-riding is one of the best exercises for correction of Knock-knees.
- ❖ Keep a pillow between the knees and stand straight for some time. Both the feet should touch each other.
- ❖ Use of walking calipers may be beneficial.
- ❖ Perform padmasana and gomukhasana regularly.

5. **Bow legs** :_Bow legs are also a postural deformities. Approximately, it is opposite to knock knees position. If there is wide gap between the knees when standing with feet together, the individual has bow legs or genu varum. In these deformities, the knees are widely apart. There remains a wide gap between knees when a bow legged person keeps his feet together. This deformity can be observed easily, when an individual walks or runs.



Causes of Bow legs :

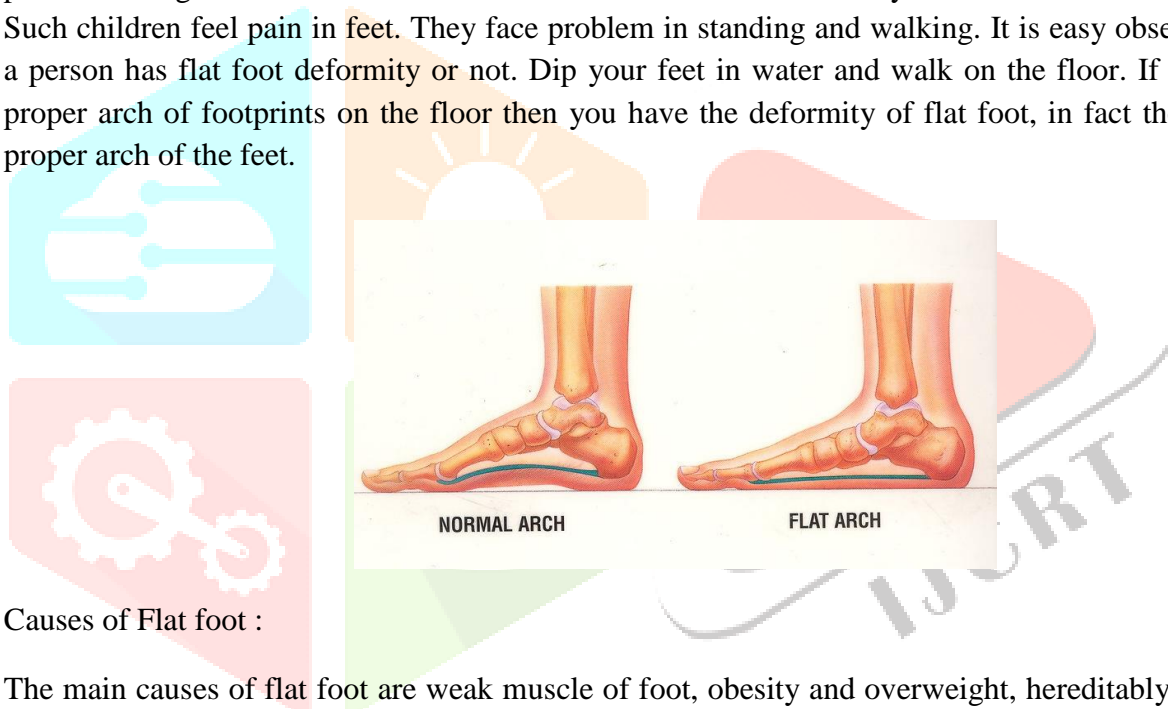
The main causes of Bow legs are Rickets, deficiency of vitamin D and calcium in diet, early childhood walking with weight and obesity.

Preventive and Remedial Measures :

The role of exercises in case of bow legs is approximately the same as that in knock-knees. The deformity of bow legs can be corrected up to some extent during the early phase of childhood. During later childhood and adulthood, exercises don't play a significant role. The following exercises may be beneficial for the correction of bow legs.

- ❖ Stand erect with feet joined together. Wrap a soft piece of cloth on both legs at knee level. Tighten it with the help of a partner. Try to squat as far as possible. Hold that position of squat for some time. Come to the original position and repeat the exercise 4 to 6 times.
- ❖ Walk for some distance on the inner edge of the feet.
- ❖ Walk by bending the toes inward.
- ❖ Perform ardhmatseyendrasana, garudasana and ardha chakrasana.

6. **Flat foot** : If one cannot slide his fingers under the arch of an individual's foot while he is standing in his habitual position, or if the arch is resting on the supporting surface, the foot is classified as flat foot. Flat foot is generally found among newly born babies but it becomes a postural deformity if it still persists during lateral childhood. The children with flat foot deformity cannot be efficient sportspersons. Such children feel pain in feet. They face problem in standing and walking. It is easy observed whether a person has flat foot deformity or not. Dip your feet in water and walk on the floor. If there is not a proper arch of footprints on the floor then you have the deformity of flat foot, in fact there should be proper arch of the feet.



Causes of Flat foot :

The main causes of flat foot are weak muscle of foot, obesity and overweight, hereditably, poor quality shoes without sole curve.

Preventive and Remedial Measures :

For correcting functional flat foot one should exercise by rising on the toes, by climbing stairs on the toes, by rope skipping, and by cycling. The foot should be put through the extreme range of its motions by voluntary contraction to stretch the shortened soft structure. The emphasis should be upon the exercise involving toe flexion, foot and ankle flexion, and supination. One should wear special shoes properly fitted with arch support, made by an orthopedic center. Standing in one position for a long time and wearing heavy shoes should be avoided.

7. **Round Shoulders** : Round shoulders is a common postural deformity in which shoulders become round and sometimes they are projected forward.



Causes of Round shoulders :

The main causes of round shoulders are carrying overloaded school bag by children wearing tight fitted clothes, weak muscles of chest and shoulder, wrong posture during reading or writing over chair or bed and focusing too much on certain exercises etc.

Preventive and Remedial Measures :

Round shoulders can be corrected by the following exercises,

- ❖ Keep your tips of fingers on your shoulder and rotate your elbows in clockwise and anticlockwise directions for some time.
- ❖ Hold the horizontal bar regularly for some time.
- ❖ Perform chakrasana and dhunurasana for some time.

Conclusion :

At present time so many instruments are discovered for prevent and treatment of postural deformities, but this is very expenditure so it cannot use every person. But Yoga asana is the best policy for treatment of postural deformities without expenditure. Yoga asana is the simply slow stretching exercise, so every person can be perform easily and which help maintain the good body posture that give the good personality. Students should also be encouraged to engage in exercises for increasing general strength, endurance, balance and flexibility. Methods of relaxation should also be undertaken. Along with the exercise, posture consciousness should also be developed among such students who have postural deformities. The appropriate remedial action should be started as soon as possible. Immediate attention is required as bad posture exerts unusual and a typical stress on the soft tissues, muscles and ligaments of the body segment. Time to time screening of body posture will go a long way in preventing postural defects. It must be remembered that the means of correcting postural deviations must be based upon medical diagnosis and recommendations.

References :

1. Kappler RE (1982) Postural balance and motion patterns. J Am Osteopath Assoc.
2. Miyokshi 'N'. Impact of postural deformities and spinal mobility on quality of life in postmenopausal osteoporosis" Journal Article Akita University 2003.
3. Singh A, Bains J, Gill J et.al., "Essentials of physical education" Kalyani Publishers. Rajinder Nagar, Ludhiana, 2008, 383-394.
4. Parameswara Ram, N. "Kinesiology – Physical Education and Sports." Prakash Brothers-Educational Publishers, 1988.
5. Piscopo J, Baley JA. Kinesiology: the science of movement, 2nd edition. Eurasia Publishing house, New Delhi, 1970.
6. Thomas, J.P. The Qualities of Good Posture and Suggestion for Correction - Vyayam. Madras: Alumni Association of Y.M.C.A. College of Physical Education, 1962.

7. Singleton, Mark (2010). Yoga Body : the origins of modern posture practice. Oxford University Press. ISBN 978-0-19-539534-1. OCLC 318191988.

